

REMARKS

The examiner is thanked for a thorough examination of the present patent application.

Claims 1-10, 12-17 and 19-26 are pending. Claims 1, 25, and 26 are independent claims.

I. ELECTION / RESTRICTION REQUIREMENT

The previous restriction requirement was withdrawn.

II. DRAWING OBJECTIONS

The drawings were objected to under 37 CFR 1.84(a)(5) for failing to include element 49. Corrected drawings sheet (Replacement Sheet for Sheet 7 of 9) is submitted herewith, the Replacement Sheet including the correction in compliance with 37 CFR 1.121(d).

The drawings were objected to under 37 CFR 1.84(a)(5) for including element 30a not discussed in the Specification. The Specification is amended herein discussing element 30a. No new matter is added.

III. CLAIM OBJECTIONS

Claim 9 was objected to for misspelled word. Claim 9 is currently amended to correct the misspelled word.

IV. CLAIM REJECTIONS UNDER 35 USC 112

Claim 11 was rejected under 35 USC 112. Claim 11 is currently cancelled, obviating the

rejection.

V. CLAIM REJECTIONS UNDER 35 USC 103(a)

Claim 1 rejected under 35 U.S.C. 103(a) as being unpatentable over Jaffe (U.S. Patent no. 3,760,237) in view of Gramann et al. (U.S. Patent no. 5,907,151). The applicants respectfully traverse.

The applicants respectfully submit that Claim 1, as originally submitted, is allowable over the cited references, individually or in any combination. Nonetheless, the applicant amends herein, without prejudice, Claim 1 to recite the present invention with even more particularity.

For a valid rejection under 35 U.S.C. 103(a), “[t]he **examiner bears the initial burden** of factually supporting any *prima facie* conclusion of obviousness.” MPEP Edition 8 Revision 2, Sec. 2142 (italic in the original; bold added). “The PTO bears the burden of establishing a case of *prima facie* obviousness.” *In re Rijckaert*, 9 F.3d 1531, 1532, 28 USPQ2d 1955, 1956 (Fed. Cir. 1993); *In re Oetiker*, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992); *Graham v. John Deere Co.*, 383 U.S. 1, 17-18 (1966),

“To establish a *prima facie* case of obviousness, three basic criteria must be met. **First**, there **must** be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. **Second**, there **must** be a reasonable expectation of success. **Finally**, the prior art reference (or references when combined) **must** teach or suggest all the claim limitations.” MPEP Edition 8 Revision 2, Sec. 2142 (italic in the original; bold added), citing *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

“The teaching or suggestion to make the claimed combination and the reasonable expectation of success **must both be found in the prior art, and not based on applicant’s disclosure.**” Id. (bold added). In fact, “The mere fact that reference can be combined or modified does not render the resultant combination obvious **unless the prior art also suggests** the desirability of the combination.” MPEP Edition 8 Revision 2, Sec. 2143.01 (underline in the

original, bold added), citing *In re Mills*, 916 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990). Again, there must be a suggestion or motivation **in the reference** to do so. *In re Mills*, 916 F.2d at 682, 16 USPQ2d at 1432 (emphasis added).

The rejection is invalid and should be withdrawn for a number of reasons. Firstly, there is no motivation to combine or modify the references.

The rejection alleges that such is motivation exists as follows:

“The insulating layer, electrically conductive tracks, and underside contact provide connections on the carrier plate. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to have a thermally conductive, electrically insulating film, a first conductive element on said insulating film, and a second conductive element on said insulating film, wherein at least one of said first and second conductive elements comprises a mounting pad for mounting a light emitting die thereon in order to provide connections to the substrate.”

Office Action, p. 5.

In short, the rejection alleges that the motivation to combine the references arises from the fact that “The insulating layer, electrically conductive tracks, and underside contact provide connections on the carrier plate.” This is incorrect. Further, it makes no citations to any of the cited references as required by *In re Mills* and the MPEP.

This is because the cited references do not offer any reasons for which they should be combined. In fact, the cited references cannot be combined. The Gramann reference teaches etching a recess 8 into a cover plate (substrate) 7 to place its semiconductor die 1 wherein walls of the substrate 7 surrounds semiconductor die 1. In contrast, the Jaffe reference teaches fabricating an alleged reflector plate (viscous material 22) above a flat substrate 11 where the alleged reflector plate (viscous material 22) surrounds its diode 12. Accordingly, the Gramann design and the Jaffe design are mutual exclusive and cannot be combined.

Secondly, there is no expectation of success. Since the cited references cannot be combined, there is no expectation of success of combining these designs.

Finally, even if combined, modified, or both, the cited references, individually or in any combination fail to teach all the limitations recited in Claim 1. For one, Claim 1 recites, *inter alia*, that “at least one of said first and second conductive elements comprises a mounting pad for mounting a light emitting die thereon.” Claim 1. In contrast, in the Gramann reference, its light emitting die 1 is mounted on an optical coupling medium (casting resin) 29. See, e.g., Gramann Figures 1-6, and 8. In the Gramann reference, its alleged conductive elements (terminal tracks 12 and 13) are connected to its semiconductor die 1; however, neither of the alleged conductive elements (terminal tracks 12 and 13) comprise a mounting pad.

For two, Claim 1 recites, *inter alia*, “a reflector plate coupled to said substrate and substantially surrounding the mounting pad, said reflector plate defining a reflection surface.” Claim 1 (underlined portion currently amended). That is, Claim 1 recites a reflector plate defining a reflection surface that reflects light. In contrast, the alleged reflector plate (viscous material 22) of the Jaffe reference is made of **clear** viscous material:

“The material 22 should be **transmissive** for the light (visible or infrared) emitted by the diode 12.”

The Jaffe reference, col. 2, lines 61-64 (bold added).

That is, the alleged reflector plate (viscous material 22) of the Jaffe reference **transmits, not reflects**, light. Consequently, the alleged reflector plate (viscous material 22) of the Jaffe reference does not and cannot teach the reflector of the present invention.

Failure to meet any one element of the *prima facie* case of obviousness is sufficient to invalidate the rejections. Here, none of the three element of the *prima facie* case can be established. Accordingly, the applicants respectfully submit that Claim 1, is allowable over the cited references.

Claims 2-5, 8, 16, 17, 19, and 20 were rejected under 35 U.S.C. 103(a) as being unpatentable over the Jaffe reference in view of the Gramann reference. The applicants respectfully traverse. Claims 2-5, 8, 16, 17, 19, and 20 depend, directly or ultimately, from Claim

1 and are, therefore, allowable for at least the same reasons for which Claim 1 is allowable. See *In re Fine*, 837 F.2d 1071, 5 U.S.P.Q.2d 1596 (Fed. Cir. 1988).

Claims 5 and 6 were rejected under 35 U.S.C. 103(a) as being unpatentable over the Jaffe reference in view of the Gramann reference and further in view of Carey et al. (U.S. Patent no. 6,274,924). The applicants respectfully traverse.

The applicants respectfully submit that the rejection is insufficient to establish the *prima facie* case of obviousness, thus should be withdrawn on **procedural** grounds. Again, the “mere fact that reference can be combined or modified does not render the resultant combination obvious **unless the prior art also suggests** the desirability of the combination.” MPEP Edition 8 Revision 2, Sec. 2143.01 (underline in the original, bold added), citing *In re Mills*, 916 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990).

Further, the applicants respectfully submit that the rejection is insufficient to establish the *prima facie* case of obviousness, thus should be withdrawn on **substantive** grounds. Claims 5 and 6 depend, directly or ultimately, from Claim 1 and are, therefore, allowable for at least the same reasons for which Claim 1 is allowable. See *In re Fine*, 837 F.2d 1071, 5 U.S.P.Q.2d 1596 (Fed. Cir. 1988).

Claims 9, 10, 12, 13, and 27 were rejected under 35 U.S.C. 103(a) as being unpatentable over the Jaffe reference in view of the Gramann reference and further in view of Jory et al. (U.S. Patent no. 6,501,103). The applicants respectfully traverse.

The applicants respectfully submit that the rejection is insufficient to establish the *prima facie* case of obviousness, thus should be withdrawn on **procedural** grounds. Again, the “mere fact that reference can be combined or modified does not render the resultant combination obvious **unless the prior art also suggests** the desirability of the combination.” MPEP Edition 8 Revision 2, Sec. 2143.01 (underline in the original, bold added), citing *In re Mills*, 916 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990).

Further, the applicants respectfully submit that the rejection is insufficient to establish the *prima facie* case of obviousness, thus should be withdrawn on **substantive** grounds. Claims 9, 10,

12, 13, and 27 depend, directly or ultimately, from Claim 1 and are, therefore, allowable for at least the same reasons for which Claim 1 is allowable. See *In re Fine*, 837 F.2d 1071, 5 U.S.P.Q.2d 1596 (Fed. Cir. 1988).

Claim 14 was rejected under 35 U.S.C. 103(a) as being unpatentable over the Jaffe reference, in view of the Gramann reference, in view of the Jory reference, and further in view of Kuwabara (U.S. Patent no. 6,124,635). The applicants respectfully traverse.

The applicants respectfully submit that the rejection is insufficient to establish the *prima facie* case of obviousness, thus should be withdrawn on **procedural** grounds. Again, the “mere fact that reference can be combined or modified does not render the resultant combination obvious **unless the prior art also suggests** the desirability of the combination.” MPEP Edition 8 Revision 2, Sec. 2143.01 (underline in the original, bold added), citing *In re Mills*, 916 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990).

Further, the applicants respectfully submit that the rejection is insufficient to establish the *prima facie* case of obviousness, thus should be withdrawn on **substantive** grounds. Claim 14 depends ultimately from Claim 1 and is, therefore, allowable for at least the same reasons for which Claim 1 is allowable. See *In re Fine*, 837 F.2d 1071, 5 U.S.P.Q.2d 1596 (Fed. Cir. 1988).

Claim 15 was rejected under 35 U.S.C. 103(a) as being unpatentable over the Jaffe reference, in view of the Gramann reference, and further in view of Maekawa (U.S. Patent no. 6,281,435). The applicants respectfully traverse.

The applicants respectfully submit that the rejection is insufficient to establish the *prima facie* case of obviousness, thus should be withdrawn on **procedural** grounds. Again, the “mere fact that reference can be combined or modified does not render the resultant combination obvious **unless the prior art also suggests** the desirability of the combination.” MPEP Edition 8 Revision 2, Sec. 2143.01 (underline in the original, bold added), citing *In re Mills*, 916 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990).

Further, the applicants respectfully submit that the rejection is insufficient to establish the *prima facie* case of obviousness, thus should be withdrawn on **substantive** grounds. Claim 15

depends ultimately from Claim 1 and is, therefore, allowable for at least the same reasons for which Claim 1 is allowable. See *In re Fine*, 837 F.2d 1071, 5 U.S.P.Q.2d 1596 (Fed. Cir. 1988).

Claim 21 was rejected under 35 U.S.C. 103(a) as being unpatentable over the Jaffe reference, in view of the Gramann reference, and further in view of Mills et al. (U.S. Patent no. 6,525,386). The applicants respectfully traverse.

The applicants respectfully submit that the rejection is insufficient to establish the *prima facie* case of obviousness, thus should be withdrawn on **procedural** grounds. Again, the “mere fact that reference can be combined or modified does not render the resultant combination obvious **unless the prior art also suggests** the desirability of the combination.” MPEP Edition 8 Revision 2, Sec. 2143.01 (underline in the original, bold added), citing *In re Mills*, 916 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990).

Further, the applicants respectfully submit that the rejection is insufficient to establish the *prima facie* case of obviousness, thus should be withdrawn on **substantive** grounds. Claim 21 depends from Claim 1 and is, therefore, allowable for at least the same reasons for which Claim 1 is allowable. See *In re Fine*, 837 F.2d 1071, 5 U.S.P.Q.2d 1596 (Fed. Cir. 1988).

Claim 22 was rejected under 35 U.S.C. 103(a) as being unpatentable over the Jaffe reference, in view of the Gramann reference, and further in view of Butterworth et al. (U.S. Patent no. 5,847,507). The applicants respectfully traverse.

The applicants respectfully submit that the rejection is insufficient to establish the *prima facie* case of obviousness, thus should be withdrawn on **procedural** grounds. Again, the “mere fact that reference can be combined or modified does not render the resultant combination obvious **unless the prior art also suggests** the desirability of the combination.” MPEP Edition 8 Revision 2, Sec. 2143.01 (underline in the original, bold added), citing *In re Mills*, 916 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990).

Further, the applicants respectfully submit that the rejection is insufficient to establish the *prima facie* case of obviousness, thus should be withdrawn on **substantive** grounds. Claim 22 depends from Claim 1 and is, therefore, allowable for at least the same reasons for which Claim 1

is allowable. See *In re Fine*, 837 F.2d 1071, 5 U.S.P.Q.2d 1596 (Fed. Cir. 1988).

Claims 23 and 24 were rejected under 35 U.S.C. 103(a) as being unpatentable over the Jaffe reference in view of the Gramann reference and further in view of Barnett et al. (U.S. Patent no. 6,541,800). The applicants respectfully traverse.

The applicants respectfully submit that the rejection is insufficient to establish the *prima facie* case of obviousness, thus should be withdrawn on **procedural** grounds. Again, the “mere fact that reference can be combined or modified does not render the resultant combination obvious **unless the prior art also suggests** the desirability of the combination.” MPEP Edition 8 Revision 2, Sec. 2143.01 (underline in the original, bold added), citing *In re Mills*, 916 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990).

Further, the applicants respectfully submit that the rejection is insufficient to establish the *prima facie* case of obviousness, thus should be withdrawn on **substantive** grounds. Claims 23 and 24 depend from Claim 1 and are, therefore, allowable for at least the same reasons for which Claim 1 is allowable. See *In re Fine*, 837 F.2d 1071, 5 U.S.P.Q.2d 1596 (Fed. Cir. 1988).

Independent Claim 25 was rejected under 35 U.S.C. 103(a) as being unpatentable over the Jaffe reference in view of the Gramann reference. The applicants respectfully traverse. The applicants respectfully submit that Claim 25, as originally submitted, is allowable over the cited references, individually or in any combination. Nonetheless, the applicant amends herein, without prejudice, Claim 25 to recite the present invention with even more particularity.

Though different in scope, Claim 25 recites similar limitations as Claim 1. Accordingly, the applicants respectfully submit that the above analysis of Claim 1 and its cited prior art references are equally applicable for Claim 25 and that Claim 25 is allowable over the cited references for at least the same reasons for which Claim 1 is allowable.

Independent Claim 26 was rejected under 35 U.S.C. 103(a) as being unpatentable over the Jaffe reference in view of the Gramann reference. The applicants respectfully traverse. Though different in scope, Claim 26 recites similar limitations as Claim 1. Accordingly, the applicants

respectfully submit that the above analysis of Claim 1 and its cited prior art references are equally applicable for Claim 26 and that Claim 26 is allowable over the cited references for at least the same reasons for which Claim 1 is allowable.

For example, Claim 26 recites, *inter alia*, "conductive trace forming a mounting pad for mounting a light emitting device." Claim 26. Such traces forming a mounting pad is found in none of the cited references.

Independent Claim 27 was rejected under 35 U.S.C. 103(a) as being unpatentable over the Jaffe reference in view of the Gramann reference and further in view of the Jory reference. Claim 27 is currently cancelled, obviating the rejection.

CONCLUSION

In view of the foregoing Remarks, the applicants respectfully submit that the entire application is in condition for allowance. The applicant respectfully requests that a timely Notice of Allowance be issued in this case.

Respectfully submitted,



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